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ABSTRACT

The cultural bias of the Adult Performance Level Assessment, Form AA-1 (APLA) was examined. The potential influence of cultural differences on scores of a major ethnic group, Acadians or Cajuns, was investigated. Assessment items most prone to produce differences in scores were isolated and administered to selected groups. No significant differences were found between the scores of the selected ethnic group of native Acadians and non-native Acadians. It was therefore concluded that the APLA was free of cultural bias relative to the ethnic or culturally different group identified as native Acadians. This conclusion applies only to the group of persons (reading levels from 4.0 to 9.0) attending adult education programs in Louisiana, since the entire population of native and non-native Acadians was not sampled. Further research with other ethnic groups would contribute to greater knowledge of the instrument's freedom from cultural bias, thus having a positive influence on its validity. (PN)

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AN EVALUATION OF THE CULTURAL BIAS OF THE ADULT PERFORMANCE LEVEL ASSESSMENT

by

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Paper presented at the Annual Meeting
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AN EVALUATION OF THE CULTURAL BIAS OF THE ADULT PERFORMANCE LEVEL ASSESSMENT

Statement of the Problem

The problem in this study was to determine the extent of the cultural bias, if any, of the Adult Performance Level Assessment, Form AA-1, (APLA) for a selected ethnic or culturally different group. The null hypothesis, "There is no difference between the APLA scores of a selected ethnic group (native Acadians) and comparable groups not belonging to the ethnic group (non-native Acadians).", was tested for significance.

Rationale

Literacy is a serious problem in the United States and especially in Louisiana. (Training Manual, 1979) Functional literacy has been traditionally defined as completion of the fifth grade of schooling. The Adult Performance Levels Project at the University of Texas was an effort to redefine literacy in terms other than the traditional manner. (Adult Functional Competency, 1975) Basically, the Project conceptualized literacy in terms of identified knowledge, skills, and/or competencies over five subject matter areas. Also, in an effort to identify the extent of literacy in the United States (using the new definition of literacy) an assessment procedure was developed and administered.

The APL Project assessment procedure (based on Project

research) was modified by The American College Testing Program and published as the APL Assessment, a 100 item multiple choice test. (APL Assessment, 1978) The content validity of this test was determined using the work done by the APL Project research team. The test items were developed using the conceptual framework of the content and skills matrix. The items were subjected to a number of analyses which provided support for the content validity of the APLA. Reliability was estimated by using Kuder-Richardson Formula 20 (KR-20). The overall reliability for the APLA was .96 and the standard error of measurement was 4.99. (User's Guide, 1978)

A continuing concern for all tests is validity. A factor which impacts validity is cultural bias. (Gronlund, 1976) A test designed for use on a national basis is especially vulnerable to the possible influence of the elements of various cultures.

There is in Louisiana an identifiable ethnic or culturally different group numbering nearly 1,000,000 persons who are formally designated as Acadians and commonly as Cajuns. (Arsenault, 1978; Conrad, 1978; DelSesto, 1975; Dorman, 1983). They are basically of French origin and may have immigrated through the eastern provinces of Canada. The Acadian culture is strongly influenced by the French language, various customs, and heritage.

Due to these substantial differences in this ethnic group there was concern with the potential influence of cultural bias

on the scores of persons tested using the APLA, especially since the Adult Performance Level Project work was used in adult education programs in Louisiana. (Training Manual, 1979)

Definitions

Three important terms in the study were defined as follows:

Acadiana - that part consisting of 22 parishes (counties) in southwest and south central Louisiana as defined by State legislative resolution of 1971;

Native of Acadiana - a person born and reared in Acadiana, understands and/or speaks French, and considers himself/herself a native of Acadiana;

Non-Native of Acadiana - a person who may or may not have been born and reared in Acadiana, does not understand nor speak French, and/or does not consider himself/herself a native of Acadiana.

Procedure

Twenty items of the APLA were identified as potentially subject to cultural bias. The selected items were #2, 4, 5, 6, 8, 12, 15, 17, 23, 25, 26, 28, 33, 41, 52, 54, 57, 75, 78, and 87. The basis for identifying these items was the use of names of persons, places, and/or things and language used in identifying some concepts which could be different or more or less familiar in the "native Acádian" culture. The remainder of the 100 items (80) were judged to have no potential for cultural bias.

Three groups of adults were selected from two local school

district adult education programs. The first group was identified as natives of Acadiana and were selected from one local adult education program in Acadiana. The second and third groups both consisted of non-native Acadians. The second group was identified as non-natives of Acadiana but residing in Acadiana. The third group was identified as non-natives of Acadiana residing in Louisiana but not in Acadiana. The two groups selected in Acadiana consisted of 25 adults each. The group from outside of Acadiana consisted of 20 adults.

The appropriateness of the size of each group was determined from Applied Linear Statistical Models by Neter and Wasserman. Samples were drawn from local school district adult education programs because relevant information needed for the study was almost the only feasible avenue for collecting the data. Random selection was encouraged but in some cases groups were composed of the entire enrollment in the adult education program in order to establish sufficient numbers of adults. No record was made of the age of the persons tested but it would be safe to assume that many were less than 23 since the average age of adult education students has dropped in the last five years.

In order to determine the possibility of cultural bias the APLA scores (controlled for reading level) were subjected to statistical tests. A null hypothesis approach was used.

A grade-equivalence reading score was determined for each adult using the California Achievement Test. The reading level was the controlled variable. Reading level was controlled since

the APLA is a group test which requires reading skills. Adults with grade-equivalent reading scores which could range from 4.0 to 9.0 were selected for testing with the twenty items of the APLA. Reading levels from 4.0 to 9.0 were selected since this range seemed to provide the greatest potential for differences in APLA scores. (Training Manual, 1979) Adults were selected and tested by local adult education program teachers using the stated criteria.

Findings

Group 1 data was for natives of Acadiana. Their reading levels ranged from 4.6 to 9.0 and their APLA scores ranged from 5 to 18.

Group 2 data was for non-natives of Acadiana who resided in Acadiana. Their reading levels ranged from 4.4 to 9.0 and their APLA scores ranged from 5 to 18.

Group 3 data was for non-natives of Acadiana who resided outside of Acadiana, but in Louisiana. Their reading scores ranged from 4.2 to 9.0 and their APLA scores ranged from 4 to 20. Additional relevant data for the three groups are summarized in Table 1.

The data were subjected to analysis of covariance using the BMDP program. (Dixon, 1983) APLA scores were analyzed with reading level serving as the only covariate. There was a significant relationship at the 0.05 level of confidence between reading level and the APLA scores ($F = 10.65$, tail probability = $0.0017 < 0.05$). However, when the APLA scores were adjusted for

reading level there was no significant difference between the means of the three sets of scores (F = 0.65, tail probability = 0.5268 > 0.05). Therefore, the null hypothesis was accepted.

TABLE I

MEANS AND STANDARD DEVIATIONS FOR NATIVES AND NON-NATIVES OF ACADIANA

	C.A.T. Reading Level		APLA Scores		Adj. APLA Means	n
	M	SD	M	SD		
Group 1	7.50	1.33	14.28	3.36	14.00	25
Group 2	7.12	1.27	13.44	3.58	13.53	25
Group 3	6.98	1.53	14.45	3.93	14.68	20

Conclusions

The cultural bias of the APLA was the prime concern of this study. The potential influence of cultural differences on scores of a major ethnic group, Acadians or Cajuns, was investigated. Assessment items most prone to produce differences in scores were isolated and administered to selected groups. No significant differences were found between the scores of the selected ethnic group of native Acadians and non-native Acadians. It was therefore concluded that the APLA was free of cultural bias relative to the ethnic or culturally different group identified as native Acadians. This conclusion applies only to the group of persons (reading levels from 4.0 to 9.0) attending adult

education programs in Louisiana since the entire population of native and non-native Acadians was not sampled. Further research with other ethnic groups would contribute to greater knowledge of the instrument's freedom from cultural bias, having a positive influence on its validity.

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